REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action, however, tentatively rejected all claims 1-15. In response to the rejections, Applicant has amended independent claims 1, 6, and 11 to clearly define over the cited art, and thereby render the rejections moot. These amendments are clearly supported by the original application, including the text from the last paragraph of page 5 through the third paragraph on page 7. Accordingly, the amendments add no new matter to the application.

Applicant submits that instant claims 1-15 are clearly in condition for allowance, for reasons that will be discussed below. Applicant presents the remarks below in an effort to further point out the distinctions to the Examiner at this time. The accompanying remarks are necessary in light of the position taken in the Office Action. Applicant presents the remarks below in an effort to further point out certain distinctions to the Examiner at this time.

The Office Action cited the following references:

- U.S. Patent Application Publication 2002/0054639 by Kawashima et al., entitled DEVICE AND METHOD FOR CODING VIDEO INFORMATION, (referred to as "Kawashima" hereinafter);

- U.S. Patent Application Publication 2003/0053702 by Hu., entitled METHOD OF COMPRESSING DIGITAL IMAGES, (referred to as "Hu" hereinafter);

- U.S. Patent 6,957,350 by Demos et al., entitled ENCRYPTED AND WATERMARKED TEMPORAL AND RESOLUTION LAYERING IN ADVANCED TELEVISION, (referred to as "Demos" hereinafter).

Discussion of Rejections

Claims 1-15 have been rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Kawashima in view of Hu and further in view of Demos. Applicant respectfully requests reconsideration of these rejections for at least the following reasons.

The Office Action stated that:

Regarding Claim 1, 6, 11, 18, Kawashima discloses … But does not disclose generate supplementary data by subtracting the quantized data multiplied by first scale and generating quantized supplemental data by dividing by second scale & Par. 0102 & and encoding using variable length encoding. However, Hu discloses generate supplementary data by subtracting the quantized data multiplied by first scale see Fig. 1 item 125 and generating quantized supplemental data by dividing by second scale see Fig. 1 item 140…

(Office Action, pgs. 2-3).

Regarding the independent claims 1, 6, and 11, a careful readings of Kawashima, Hu and Demos will reveal that there is *no mention, disclosure, or teaching of* technical characteristics of generating supplementary data by subtracting the quantized multiplied by the first quantization scale from the video data, and generating quantized supplementary data by dividing the supplementary data by dividing the supplementary data into the second quantization scale.

Hu discloses a differentiation stage, which includes stages 125 to 170, determines the difference between a subsampled image and a reference image scaled up from a reconstructed image subsampled at the adjacent lower quality scale [see paragraph 0023 of Hu]. The disclosed quality scales relates to seven subsampling scales as shown in Tables 1 to 6 [paragraphs 0025 to 0031]. However, the claimed second and third equations are $D_s = V - (V/Q_1) x Q_1$ and $D_{qs} = D_s/Q_2$, where D_s represents the supplementary data, D_{qs} represents the quantized supplementary data, V represents the video, Q_1 represents the first quantization scale, and Q_2 represents the second quantization. These two equations are independent from the image subsampling and image reconstruction scaled up from reconstructed image subsampled at the adjacent lower quality scale. Accordingly, the claimed first and quantization scales *are not* the disclosed subsampling scales by Hu. Moreover, the claimed second and third equations *are not* the disclosed differentiation stage by Hu.

As specifically embodied in the independent claims, claims 1, 6, and 11 recite:

1. A system of video stream encryption, comprising:
    a storage device capable of storing a first quantization scale and a second quantization scale, wherein the first quantization scale is greater than the second quantization scale; and
    an encryption application coupled to the storage device, configured to receive video data, the first quantization scale and the second quantization scale, generate quantized data *by a first equation*, generate supplementary data *by a second equation*, generate quantized supplementary data *by a third equation*, encode and encrypt the quantized supplementary data using variable length encoding and symmetrical/asymmetrical encryption algorithm,
    wherein the first equation is represented by $D_q = V/Q_1$, the second equation is represented by $D_s = V - (V/Q_1) x Q_1$, the third equation is represented by $D_{qs} = Ds/Q2$, D_q represents the quantized data, V represents the video, Q_1 represents the first quantization scale, D_s represents the supplementary data, D_{qs} represents the quantized supplementary data, and Q_2 represents the second quantization.

6. A method of video stream encryption, comprising using an electronic device having a CPU to perform the steps of:

receiving video data, a first quantization scale and a second quantization scale, wherein the first quantization scale is greater than the second quantization scale;

generating quantized data by a first equation;

generating supplementary data by a second equation;

generating quantized supplementary data by a third equation; and

generating encrypted quantized supplementary data using variable length encoding and symmetrical/asymmetrical encryption algorithm,

wherein the first equation is represented by $D_q = V/Q_1$, the second equation is represented by $D_s = V - (V/Q_1)xQ_1$, the third equation is represented by $D_{qs} = Ds/Q2$, D_q represents the quantized data, V represents the video, Q_1 represents the first quantization scale, D_s represents the supplementary data, D_{qs} represents the quantized supplementary data, and Q_2 represents the second quantization.

11. A storage medium for storing a computer program providing a method of video stream encryption, comprising using a computer to perform the steps of:

receiving video data, a first quantization scale and a second quantization scale, wherein the first quantization scale is greater than the second quantization scale;

generating quantized data by a first equation;

generating supplementary data by a second equation;

generating quantized supplementary data by a third equation; and

generating encrypted quantized supplementary data using variable length encoding and symmetrical/asymmetrical encryption algorithm**,**

wherein the first equation is represented by $D_q = V/Q_1$, the second equation is represented by $D_s = V - (V/Q_1)xQ_1$, the third equation is represented by $D_{qs} = Ds/Q2$, D_q represents the quantized data, V represents the video, Q_1 represents the first quantization scale, D_s represents the supplementary data, D_{qs} represents the quantized supplementary data, and Q_2 represents the second quantization.

(*Emphasis added.*) Claims 1, 6, and 11 patently define over the cited art for at least the reasons that the cited art fails to disclose the features emphasized above.

For the reasons stated above, Kawashima, Hu and Demos do not teach or suggest all the limitations of instant claim 1, 6, or 11 of the present application. Therefore, claims 1, 6, and 11 are allowable over the cited reference. Insofar as all claims depend from instant claims 1, 6, or 11, these claims are also in condition for allowance.

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of claims 1-15.

CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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By: _____

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